

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312921

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CA125-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312921
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-S-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2307.0 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

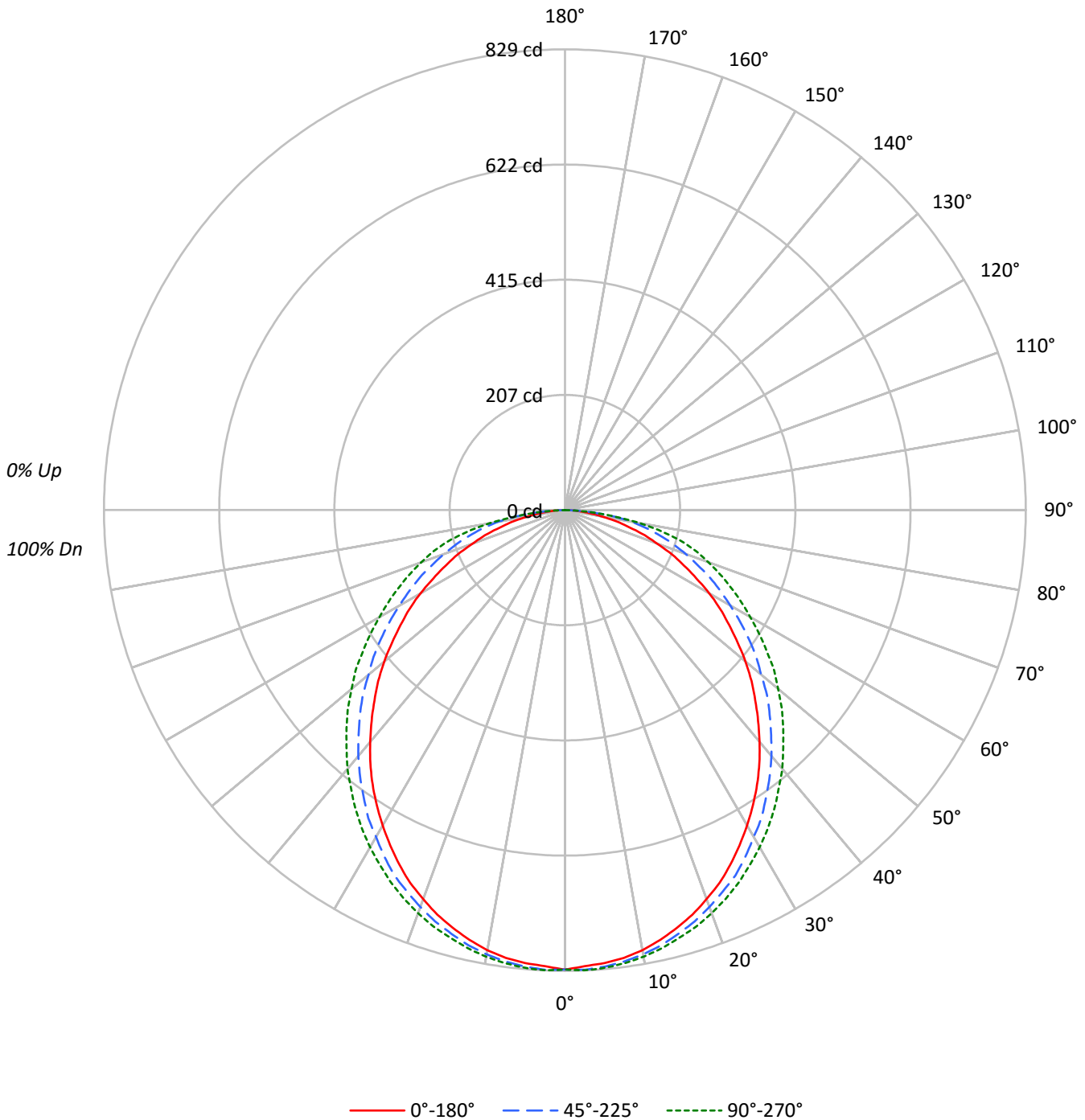
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2225	2225	2225
5°	2210	2227	2233
10°	2197	2218	2229
15°	2168	2198	2219
20°	2133	2176	2210
25°	2090	2154	2196
30°	2037	2110	2177
35°	1980	2072	2157
40°	1913	2030	2136
45°	1843	1983	2114
50°	1775	1929	2095
55°	1692	1894	2081
60°	1616	1848	2074
65°	1508	1837	2097
70°	1389	1821	2160
75°	1254	1847	2272
80°	1085	1901	2135
85°	898	1596	1596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.2	3.4
10°-20°	222.5	9.6
20°-30°	332.9	14.4
30°-40°	394.2	17.1
40°-50°	401.8	17.4
50°-60°	360.1	15.6
60°-70°	281.9	12.2
70°-80°	181.8	7.9
80°-90°	53.7	2.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	633.5	27.5
0°-40°	1027.8	44.5
0°-60°	1789.6	77.6
0°-90°	2307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2307.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	818	820	824	826	827	78
15°	778	782	789	796	796	219
25°	704	710	726	735	740	324
35°	603	610	631	650	657	377
45°	484	495	521	548	555	374
55°	361	372	404	432	444	323
65°	237	251	288	316	329	235
75°	121	139	178	208	218	129
85°	29	40	52	52	52	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.7	826.7	826.7	826.7	826.7
2.5°	821.3	823.4	827.7	828.8	828.8
5°	818.1	820.2	824.5	825.6	826.7
7.5°	812.7	813.8	819.1	821.3	822.4
10°	804.1	806.2	811.6	814.8	815.9
12.5°	792.2	795.5	801.9	806.2	807.3
15°	778.2	782.5	789.0	795.5	796.5
17.5°	763.2	767.5	776.1	783.6	785.8
20°	744.9	750.2	759.9	768.5	771.8
22.5°	726.6	730.9	742.7	753.5	756.7
25°	704.0	710.4	725.5	735.2	739.5
27.5°	680.3	687.8	702.9	715.8	720.1
30°	655.5	663.1	679.2	695.4	700.7
32.5°	629.7	638.3	657.7	673.8	679.2
35°	602.8	610.3	630.8	650.1	656.6
37.5°	574.8	581.3	604.9	625.4	631.8
40°	544.7	553.3	578.0	601.7	608.2
42.5°	514.5	524.2	549.0	574.8	581.3
45°	484.4	495.1	521.0	547.9	555.4
47.5°	455.3	463.9	493.0	518.8	529.6
50°	424.1	432.7	460.7	489.8	500.5
52.5°	391.8	403.6	433.8	461.8	474.7
55°	360.6	372.4	403.6	431.6	443.5
57.5°	331.5	341.2	373.5	402.6	414.4
60°	300.3	308.9	343.4	374.6	385.3
62.5°	266.9	279.9	315.4	344.4	357.4
65°	236.8	250.8	288.5	316.5	329.4
67.5°	208.8	221.7	258.3	288.5	302.5
70°	176.5	193.8	231.4	261.6	274.5
72.5°	150.7	165.8	204.5	234.7	248.6
75°	120.6	138.9	177.6	207.7	218.5
77.5°	95.8	114.1	150.7	174.4	179.8
80°	70.0	88.3	122.7	134.5	137.8
82.5°	47.4	64.6	88.3	91.5	92.6
85°	29.1	39.8	51.7	51.7	51.7
87.5°	14.0	16.1	18.3	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)